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ABSTRACT

Regis College (Massachusetts) has expanded student learning skills through through changes in the management program toward increasing integration of management and liberal arts disciplines and increased opportunities for cooperative and experiential learning. The program stresses making conceptual connections and part/whole relations in team-learning situations. Four key courses shape students' development: Administrative Theory, Organization and Environment, System Dynamics, and Leadership. These contain and reinforce key instructional changes intended to alter student/faculty relationships and roles. Students engage in team learning to solve classroom problems, conduct research, and organize change projects. Students develop divergent thinking and incorporate alternatives in diverse groups. Both management and liberal arts faculty teach integrated courses designed to build both content and process skills into the academic experience. Regis has evaluated its program with traditional student summary feedback forms which also ask about teamwork and interdisciplinary learning, student self-assessment of contribution to task, and total group grades for projects and presentation. Plans for future evaluation methods include open feedback sessions at the conclusion of courses. Appended is am example of integrated content taken from a unit on history, work, and society within the course on Administrative Theory and Practice. (JB)

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DEVELOPING STUDENTS' CAPACITY FOR LEARNING AND THINKING THROUGH INTEGRATED CURRICULUM AND TEAM LEARNING EXPERIENCES

International Association For The Study Of Cooperation In Education

July 10, 1994

Lewis & Clark College
Portland, Oregon

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Abstract

The paper elaborates on the helping and hindering factors which contributed to a significant shift in management education at Regis College. During the past several years we have increasingly moved from traditional functional courses in management to multi-discipline cooperative approaches to learning. The evolving roles of faculty in facilitating and directing learning are examined.

Employers increasingly report that many college graduates do not possess strong analytic skills or application techniques. When students experience difficulty in making connections (part-whole relationships) and engaging in interdependent, team tasks, their is both an opportunity and responsibility for change. This paper summarizes the underlying operating elements which faculty supported in producing an integration of management and liberal arts disciplines and the opportunity for cooperative/experiential learning. Examples of student team field projects and the relationship to process and task skills is discussed. Early efforts to evaluate the effectiveness of the program reveal the difficulty in moving beyond attitudinal responses to longitudinal review of student outputs/projects.

A sample of integrated content in management taken from a unit on history, work and society within the course on Administrative Theory and Practice is part of the addendum to this paper.

Title: Developing Students' Capacity for Learning and Thinking Through Integrated Curriculum and Team-Learning Experiences

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This paper relates how student-learning skills can be expanded through involvement in an integrated management liberal arts experience which stresses making conceptual connections and part/whole relations in a team-learning situation. The undergraduate management instruction at Regis College utilizes cooperative work groups and uses learning frameworks including systems thinking, historical contrasts, and creative problem-solving to expand students' analytical capacity and to balance divergent and convergent thought processes. In order to avoid fragmentation of learning and to reduce segmentation between disciplines, the faculty redesigned several core management courses to reflect the strong connections between literature, history, classics, and leadership and system dynamics.

The development of student competencies grows out of the integrated view of content and the emphasis on experiential learning and critical thinking. Students often enter the management program lacking exposure to systems thinking, creative problem-solving or cooperative learning. While all of the management courses require some degree of teamwork, several courses, where specifically designed to emphasize team experience, experiential field topics, and group simulations.

The basis of integrated learning is shaped by four courses designated at each stage of a student's academic schedule. (Administrative Theory, Organization and Environment, System Dynamics and Leadership) These courses contain and reinforce key instructional changes intended to alter student/faculty relationships and roles. The learning expectations include: 1. Establishing learning teams as a primary vehicle for producing academic work, 2. Creating group tasks which challenge students and develop collaborative skills. 3. Promoting inquiry and experiential learning as a balance to theory. 4. Providing real world learning tasks which stimulate more coherent analysis and systemic problem-solving. In each of the core offerings students are committed to at least one in-depth learning experience often producing a presentation or a product such as a change strategy for the college, a temporary business or a service.

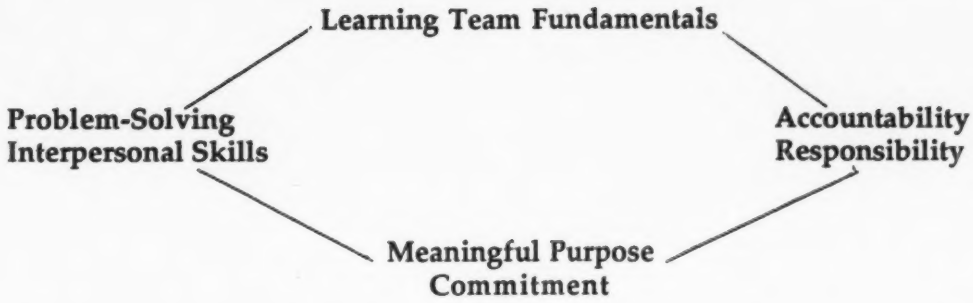
The behavioral profiles of the traditional management student and the integrated team model provide interesting contrasts.

Traditional	Integrated
Fragmented view of learning by discipline	Interconnected part/whole relations around events and topics
Passive-receiving information	Active-contructing knowledge
Dependent/Defensive/Individual	Independent/Critical/Collaborative
Reactive-responds to information	Initiates-applies, discovers, connects, investigates

Team learning is used in solving classroom problems, in conducting research and in organizing change projects in several courses including principles of leadership, system dynamics and administrative theory. Teamwork is used as a consistent and vital part of the students' learning experience. Regis students develop divergent thinking and incorporate alternatives within diverse groups. Students and faculty experience healthy groups pushing debate while soft on relationships. As supported by effective team research, the expertise of each member needs to be used for the group to become effective. Among undergraduates the struggle between the early stages of orientation and developing working standards or "norming" is key to learning group constructing working strategy. (McKinsey Quarterly 1992).

Leadership and Systems Dynamics are designed specifically to help students integrate learning by linking disciplines. Leadership connects management with classics, literature, political science, and history. Systems in management utilizes ecology, biology, and physics faculty building a framework for understanding systems applications in organization. The process of planning for work and raising productivity is part of learning how to learn by incorporating the collective talents of a work group.

Students, in developing field projects, are accountable for managing and organization of team projects. By generating questions, data gathering, problem-solving and making formal presentations, they incorporate the learned concepts and skills within the course. Further, teams experience and evaluate the basic team process skills of commitment/support, accountability/problem-solving and interpersonal/influence skills. Fundamental skills in team learning are the basis of cohesive, productive student groups.



(Katzenbach and Smith)

The integrated management courses are taught by management and liberal arts faculty. The program design called for building both content (task) and process skills into the academic experience. The current format in which cooperative learning is utilized in these courses include:

> Structured case studies with specific analytical formats for group work, some of which require differentiation of roles and cooperative design of final reports.
>
> Field Research/Action Research which involve designing a project format, gathering data, conducting analysis and reporting findings and recommendations for change.
>
> System and change projects which involve teams in assessing inadequacy of campus systems or services. this leads to the development of an intervention strategy and recommendations for improvement.
>
> Venture groups that operate small business service and assembly firms benefiting students and charitable groups.

Within Systems and Leadership courses we have attempted to move beyond the typical study group arrangements and have provided a structure set of activities which will lead to high-performing learning groups. The outputs of such groups should reflect the creative mix of team talent and should create divergent and convergent thinking.

The following is a summary of the contrasting learning elements which act as barriers and as supporting forces in our continuous effort to learn how to elevate learning and students' competencies.

Learning Factors

Helping Forces	Hindering Forces
Flexibility of student thought promotes choice and autonomy	Lack of reinforcement in students fail academic experience of integrated systemic thinking
Raised students' social maturity level	
Teams create complementary roles and strengthen weakest members	Students' assumptions about traditional academic roles/rewards
Systems thinking produces more analytical/critical discussion	Increased student emphasis on grades and grading criteria
Action-oriented group projects results as vehicle for evaluation and group momentum. Cohesiveness increases with group challenge	Increase level of student outside work--reduces opportunity for team development
Tendency for initiation action	Culture of individual self and competition vs. integrated membership in collaborative groups. Without challenge/results, learning groups break down.

Faculty Roles: Faculty support a new collaborative learning dynamic when they intentionally alter learning to include the following leadership roles:

Early Role: Architect - Designer of interactive team opportunities

Midstream: Monitor, Facilitator and Negotiator

Summative: Standard monitor, feedback agent, and resource linker to other team members

Evaluation:
Our initial attempts at evaluation consisted of traditional student summary feedback forms with some added emphasis on teamwork and interdisciplinary learning. This is now being expanded to open feedback sessions at the conclusion of a course and in student assessment of field experiences. Increasingly, we seek to build on the performance of students on projects where initial results are specified.

The evaluation of cooperative learning efforts generally includes student self-assessment of the contribution to the task, total group grades on both the completed project and presentation. Within the presentation, cooperative issues are stressed by evaluation of the coherence of a report, the integration of members, the coordination of material/content and evidence of group process learning.

While many positive skills were developed by students in the integrated courses, there are issues which must be continuously addressed and in effect produce a learning organization.

Future Issues:
Within our department we are aware of the difficulty in managing integrated and experiential learning we increasingly view it as a process of revision and re-engineering. We seek to replicate natural learning environments in business while enriching their group experience their appreciation for liberal studies and their capacity to learn how to learn. We also recognize that certain limiting factors should be attended to in using these methods of learning.

1. Learning groups go through stages of development, and we need to inform and coach students through certain critical points.

2. The dynamics of some groups cause fragmentation because of strong or opposing personalities.

3. Students need to know the direction and expected results of integrated courses or they may not develop sufficient interest during the early weeks.

4. The logistics of designing interdisciplinary offerings increases time and resource commitment of faculty.

5. There is an ongoing need to evaluate the balance of student involvement and instructional leadership.

6. Process evaluation tools are needed to monitor implementation around basic course objectives and including essential student learning competencies.

References:

Bruffee, Kenneth "Making the Most of Knowledgeable Peers," Change Magazine, 1987.

Drucker, Peter "The New Society of Organizations," Harvard Business Review, September-October, 1992.

Katzenback, Jon and Smith, Douglas, The Wisdom of Teams. Harvard Business School Press, 1993.

Kohn Alfie, Punishment by Rewards, Houghton Mifflin, Boston, 1993.

Kotter, John The Leadership Factor, The Free Press, New York, 1988.

McKensey Quarterly, 1992 - Team Performance Research.

Unit Outline: Developing systems thinking and historical perspective linking management, technology and work. Students are involved in active field investigation of people, events, technology and communities during three eras of significant change along the Charles River. .

The purpose of the unit is to utilize the historic, technical, and economic events in the Charles River area to promote higher order, systems thinking, through activities which makes use of collaboration, active inquiry and qualitative study. Leadership and learning about the transformation of work, changes in production and life in New England society through the Industrial Revolution.

Students and faculty are supported by business sites and Charles River Museum of Industry in helping to replicate the events, resources and interdependencies between labor, technology, and power sources in reinventing life on the Charles River during three major streams of change. These periods reflect the impact of technology on work, management and community life in. The "New Society of Organizations" described by Drucker highlights the sharp transformations in society that occur every hundred years or so. The triggers for change are multiple and often come together in a random fashion. Students working in teams may come to understand the randomness, the complexity and the impact of these triggers acting on society, work and organizations. The following is an outline of topics in this unit in which student teams engage, and investigate change, systemic relationships and paradoxical impact.

1. **The Agricultural** and small trade/artisan era characterized by loosely organized economy of individual, family and small group units of production from farms, trades and crafts.

   1800-1850.
   Responses to change factors:

   Work characteristics: employment of technology/community development

   Skills: varied, many self-taught; others passed on/trade apprentice and learn-by-doing. (Variety, autonomy/ identification of task/feedback).

   Technology: pulleys, plows, hand tools and animal-pulled apparatus, hand-steel forging equipment. (Emerging efficient cultivating method)

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Community Development: small villages integrated with work/trade farms. Characterized by open space, incremental growth.

2. **The Industrial Transformation** in new factory towns in New England; the new 1850-1930's and precision manufacturing.

   Work: segmented roles, specialization, narrowly-defined skills in most tasks except weaving, machine tools, etc.

   Routinized tasks: man extension of machine, scientific management applications, control time, motion.

   Technology: interacting with labor, with machines for manufacturing dominating worker attributes, water power and steam-driven machines.

   Product development : influences plant layout and requires large numbers of people for production.

   Community Development: rapid development of community/ dependency on the factory, multiple housing and the profile of the factory town.

   Education and learning: Apprenticeship, scientific management and formal education from schools modeled after factories with unit cell construction and organization by age grouping for efficiency.

3. **Advanced Technology Era:** characterized by labor efficiency and information 1950's to present.

   Work: requires advanced learning and technical skills, specialized work that changes frequently and requires general background and familiarity with technology. Work is complex, interdependent teams and ad hoc groups characterize day, work accomplished as projects, not linear. Linkage to supplier and customer is more directly observable.

   Skills: Knowledge driven functions include achieving specialized tasks through integration of information in organizations that are constantly learning and adapting to the environment.

   Technology: many advanced forms of technological change with high speed of product development, technology transfer. Use of alternate energy sources, information-driven and thus requires specialized training.

Product Development: Shorter product life cycles more rapid design of specialized, custom products. Embraces automation and computer assisted design. Requires emphasis on precision, quality and innovation.

Community : Population centers form and spread out with mini-satellite communities, suburban and urban blending with adjoining communities tied together by uniform communication systems. Ethnic enclaves are dispersing.

Education and learning: integrated formal learning and considerable field experience prior to management entry position. Emphasis on solid liberal arts and science, technology and math., supported by foreign language competence.

Three Learning Formats

Inquiry/ deductive investigation and problem solving and reflection

Discovery and divergent thought and forecasting

Experimental and Experiential action and risk in new areas for skill development.

Continuum of Change over three eras

Stage I

Multiple use of land for food harvest. construction, investment, nature of work dynamics varied, individual autonomous high feedback and identification with results. Work to live and survive.
Reciprocal interdependence of work and living in small villages (the vortex of community.)

Direct human skill for service and product trades, collaborative, design, implementation skills, direct quality control as a form of self-evaluation and feedback.

Artistic expression for commercial use: innovation, reliability, image tied to competency in trade.

Culture of trades.

Stage II

Scale of labor massive by previous standards. Organization systems and management science for efficiency and economies of scale.
The relationship between capital investment, technology and energy systems. The transformation of work to regulated, segmented, dependent roles. Community formation mirroring factory life. High dependence, limited autonomy, uniform living conditions among labor
Catalyst and cog, (The Boston Company) technology, investment and labor, woman workers and immigrant labor. =--=Technology and man /mass production/ sequential interdependence, multiple housing. Ethnic social strata, supervisors speak English.
Cultural and language practices as barriers and opportunities in factory life.

Stage III

Precision manufacturing and integration of process and product technologies, specialization increases but dept h of expertise and training increases geometrically. (Knowledge base of engineers is obsolete in five years.) Transportation and communication systems cause restructuring of living patterns, dispersion of ethnic groups relative to centers of work. Rte 128 becomes the modern Charles River.